Restoration Toolbox

Freshwater Diversions: Freshwater diversions (reintroduction) reestablish natural fluvial processes into wetlands.

Freshwater diversions usually take water from the upper part of a river's flow, using siphons or a levee breach fitted with various types of gravity gates. Depending upon structure design and the river stage, some portion of the river flow moves through the structure and into the receiving basin, thereby mimicking the

overbank flow process.

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Beneficial use of Dredged Material: Using dredged material from channel maintenance operations to create wetlands and habitat.

Vegetation Planting: Planting native marsh vegetation to facilitate and support wetland and habitat growth.

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Sediment Diversion: Sediment diversions restore fluvial processes in the wetland environment. Most typically, a levee is breached, and sometimes stabilized, so that some portion of river flow can move into the receiving basin. Sediment diversions are focused on capturing flows which are laden with the inorganic sediments most effective in building new land.

Sediment and Nutrient Trapping: There are two general types of projects which capture natural sediments: terracing and trapping inducing: Structures are built to slow the current, or make the flow less turbulent, and thereby promote sediment deposition.

Barrier Island Restoration: A typical project to restore a barrier island involves dedicated dredging to increase island height and width as well as structures designed to protect the island.

Marsh Management: This technique has been practiced to manage wetlands primarily for waterfowl and furbearers, and more recently for wetland protection and restoration.

Shoreline Protection: Shoreline protection includes structures applied directly to a shoreline or bankline for stabilization (concrete mats, bulkheads, and riprap while other techniques include placement of breakwaters in open water along the shoreline that are designed to alter the waves and currents, which cause erosion.

Hydrologic Restoration: The hydrologic restoration approach has been directed largely at preventing saltwater intrusion, but increasingly it is seen as a way to correct marsh impoundment problems (Swenson and Turner 1987) in areas where soils become so waterlogged that vegetation becomes severely degraded (Mendelssohn and McKee 1988).